

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H04S7/00

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H04S H04R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 03/055272 A (KONINKL PHILIPS ELECTRONICS NV) 3 July 2003 (2003-07-03)	1,10
A	the whole document	2-5
Y	DE 43 07 490 A (COHAUSZ JOERG) 15 September 1994 (1994-09-15)	1
Y	US 5 581 621 A (SHIBASAKI MITSU HARU ET AL) 3 December 1996 (1996-12-03)	10
	abstract column 27, line 9 - column 28, line 2	
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&amp;" document member of the same patent family

Date of the actual completion of the international search

16 February 2005

Date of mailing of the international search report

06. 06. 2005

Name and mailing address of the ISA

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP2004/014183

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  
1-5, 10

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-5,10

The relative location determination means, the personal device detection means, the personal device position tracking means and the re-calibration means each are adapted to communicate via a network. Object: To allow an effective sweet spot tracking.

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2. claims: 6-8

The audio system comprises an arbitration means for arbitrating between different requirements set by more than one personal device being detected according to a set of criteria. Object: To solve the problem of a multi-listener audience and/or of several personal devices detected for one user.

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3. claim: 9

The audio system comprises a physical item detection means for detecting acoustically interfering items around the sound source. Object: To avoid a negative influence of the items on the listening experience.

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4. claim: 11

The audio system comprises a position display for displaying the positions of the sound emitting components and/or the position of each personal device detected, and/or the position of the current sweet spot. Object: To keep a user of the audio system informed about the actual status of the system and to allow to use the input means to move the sweet spot or to associate the sweet spot with a personal device.

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5. claim: 12

The audio system comprises a mode switching means for switching between a mode where the sweet spot follows a listener and a mode where the sweet spot is kept in a fixed position. Object: To allow a user to change between automatic and static sweet spot positioning.

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>PRIYANTHA N B ET AL: "The Cricket Location-Support System" MOBICOM. PROCEEDINGS OF THE ANNUAL INTERNATIONAL CONFERENCE ON MOBILE COMPUTING AND NETWORKING, XX, XX, 6 August 2000 (2000-08-06), XP002181658 cited in the application abstract</p> <p>-----</p>	1-3,5

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/014183

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 03055272	A	03-07-2003	US	2003119523 A1	26-06-2003
			AU	2002366827 A1	09-07-2003
			EP	1459597 A1	22-09-2004
			WO	03055272 A1	03-07-2003
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			JP	6311590 A	04-11-1994
			JP	6311591 A	04-11-1994
			JP	3196162 B2	06-08-2001
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			JP	3171508 B2	28-05-2001
			JP	6311593 A	04-11-1994
			US	5581622 A	03-12-1996
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